

STN Search History for 10/078,927 STEADMAN

(FILE 'HOME' ENTERED AT 06:33:19 ON 19 JAN 2008)

FILE 'MEDLINE, AGRICOLA, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT  
06:33:49 ON 19 JAN 2008

L1 90863 SEA DAB1 OR DAB-1 OR "DAB 1" OR DAB OR DISABLED-1 OR DISABLED1  
OR "DISABLED 1" OR DAB OR DISABLED  
L2 4922 SEA CDK5 OR "CYCLIN DEPENDENT KINASE 5" OR "CYCLIN-DEPENDENT  
KINASE 5" OR "CYCLIN DEPENDENT KINASE-5" OR "CYCLIN-DEPENDENT  
KINASE-5" OR "PSSALRE" OR "NEURONAL CDC2-LIKE PROTEIN KINASE"  
OR "NEURONAL CDC2 LIKE PROTEIN KINASE"  
L3 41 SEA L1 (10A) L2  
L4 15 DUP REM L3 (26 DUPLICATES REMOVED)  
D IBIB ABS 1-

FILE 'CAPLUS' ENTERED AT 06:53:38 ON 19 JAN 2008

L5 92 SEA L1 (5A) PHOSPHORYLAT?  
L6 92 DUP REM L5 (0 DUPLICATES REMOVED)  
L7 7 SEA L5 AND L2  
D IBIB ABS 1-  
L8 13 SEA L5 AND SERINE  
L9 13 DUP REM L8 (0 DUPLICATES REMOVED)  
D IBIB ABS 1-

FILE 'CAPLUS' ENTERED AT 07:02:22 ON 19 JAN 2008

SET LINE 250  
SET DETAIL OFF  
E CURRAN T/AU 25  
SET NOTICE 1000 SEARCH  
L10 1 SEA ("CURRAN T"/AU OR "CURRAN T C"/AU OR "CURRAN T DAVID"/AU  
OR "CURRAN T F V"/AU OR "CURRAN T L"/AU OR "CURRAN T M"/AU OR  
"CURRAN T P"/AU OR "CURRAN THOMAS"/AU OR "CURRAN THOMAS A"/AU  
OR "CURRAN THOMAS B"/AU OR "CURRAN THOMAS C"/AU OR "CURRAN  
THOMAS F"/AU OR "CURRAN THOMAS F JR"/AU OR "CURRAN THOMAS  
I"/AU OR "CURRAN THOMAS P"/AU OR "CURRAN THOMAS PETER"/AU OR  
"CURRAN THOMAS R"/AU OR "CURRAN THOMAS R JR"/AU) AND (L1)  
SET NOTICE LOGIN SEARCH  
SET LINE LOGIN  
SET DETAIL LOGIN  
D L10 IBIB ABS  
SET LINE 250  
SET DETAIL OFF  
E KESHVARA L/AU 25  
SET NOTICE 1000 SEARCH  
L11 9 SEA ("KESHVARA LAKHU"/AU OR "KESHVARA LAKHU M"/AU OR "KESHVARA  
LAKHU MURU"/AU) AND (L1)  
SET NOTICE LOGIN SEARCH  
SET LINE LOGIN  
SET DETAIL LOGIN  
D IBIB ABS 1-

FILE 'USPATFULL' ENTERED AT 07:06:52 ON 19 JAN 2008

L12 2 SEA L1 (10A) L2  
D IBIB ABS 1-

*SRNT*

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



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PCT

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PCT/US2003/001463

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(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10/078,927 19 February 2002 (19.02.2002) US

(71) Applicant (for all designated States except US): ST. JUDE CHILDREN'S RESEARCH HOSPITAL [US/US]; Shawn A. Hawkins, 332 N. Lauderdale, Mailstop 0742, Memphis, TN 38105 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CURRAN, Thomas [US/US]; 6248 Whitmar Place North, Memphis, TN 38120 (US). KESHVARA, Lakhu [CA/US]; 1425 Dexter Lake Dr. # 20, Cordova, TN 38016 (US).

(74) Agent: HAWKINS, Shawn; St. Jude Children's Research Hospital, 332 N. Lauderdale, Mailstop 0742, Memphis, TN 38105 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
2 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CYCLIN DEPENDENT KINASE 5 PHOSPHORYLATION OF DISABLED 1 PROTEIN

(57) Abstract: The present invention is based on the discovery that the Disabled 1 protein (Dab1) is a substrate for Cdk5 activity, and is selectively phosphorylated by Cdk5. An assay to determine Cdk5 activity by detection of Dab1 phosphorylation on serine amino acids that are selectively phosphorylated by Cdk5 is provided. The invention further provides an antibody and screening kit to determine Cdk5 activity, a method for detecting a neurological disorder by determining Cdk5 activity, a method of screening for compounds that increase or decrease Cdk5 activity and a method for treating a neurological disorder with such a compound.

A3

WO 2003/070879

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/01463

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : CI2Q 1/48  
US CL : 435/15

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 435/15

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
MEDLINE, CAPLUS, AGRICOLA, EMBASE, BIOSIS, WPIDS, EAST

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,323,177 B1 (CURRAN et al.) 27 November 2001 (27.11.2001), column 4, lines 46-47 and column 23, line 65 to column 24, line 4.	1-15, 22-25, 31

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search  28 October 2005 (28.10.2005)	Date of mailing of the international search report  30 DEC 2005
Name and mailing address of the ISA/US  Mail Stop PCT, Attn: ISA/US Commissioner of Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer  David J. Steadman Telephone No. 571-272-1600

**INTERNATIONAL SEARCH REPORT**

PCT/US03/01469T

**BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

Group I, claim(s) 1-15, 22-25 and 31, drawn to methods of detecting Cyclin dependent kinase 5 (Cdk5) activity "in vitro" or "in vivo" using Disabled 1 protein (Dab1).

Group II, claim(s) 16-19, drawn to methods of identifying modulators of Cdk5.

Group III, claim(s) 20-21, drawn to methods of treatment using said modulators.

Group IV, claim(s) 26-30, drawn to antibodies which bind Dab1 only when it is phosphorylated by Cdk5 and kits comprising said antibodies.

The special technical features of Groups I, II and IV , which are methods of use of Cdk5, methods of use of modulators of Cdk5 and antibodies, respectively, share nothing in common because each method of Group I-II have different steps and use different products and have a different final goal. Similarly, the invention of Group IV shares no special technical feature with any of said methods because said methods do not employ or produce antibodies. Groups II and III share a common special technical features but said invention are not required to be rejoined under PCT Rule 13.1, because Group II invention already has a method of use of modulators.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US03/01463

**Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)**

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claim Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation Sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-15,22-25 and 31.

**Remark on Protest**  

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.